

**RESOLUTION ENHANCEMENT OF HALF-TONED BLACK  
DATA TRANSMITTED WITH COLOR DATA**

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**ABSTRACT OF THE DISCLOSURE**

5           When black regions are adjacent to color regions, the adjacent black regions  
are encoded (rendered) at the resolution of the color regions (e.g., 300 dpi) even  
though the printer has the capability of printing black at a higher resolution (e.g., 600  
dpi). To make full use of the 600 dpi resolution of the printer, the black pixels are  
separated from the color pixels. The 300 dpi resolution black pixel field is  
10   converted to a 600 dpi black image field. A window surrounding a selected group of  
(600 dpi) black/white target pixels is chosen. The pixels in the window are applied  
to a logic circuit having a plurality of logical conditions. As a result of the logic  
processing, values of each of the target pixels can be changed to a different pixel  
value to avoid jagged edges in the printed images, thereby providing a pseudo-600  
15   dpi resolution for the target pixels. The logical operations are performed until all of  
the pixels have values determined by the logic circuit. The resulting processed pixel  
field provides a more satisfactory printed image. The window is selected so that the  
pixel fields can be represented by word-length data groups. Black pixels rendered at  
the higher resolution are generally unaffected by the logic circuit. Thus, black pixels  
20   are rendered at two resolutions but printed at the same resolution.